



## Two new species of the genus *Geocharis* Ehlers, 1883 and new data on Anillina species from Portugal (Coleoptera: Carabidae)

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### Abstract

Two new species of the genus *Geocharis* Ehlers, 1883 (Carabidae: Trechinae, Anillini) are described (*Geocharis barcorabelo* n. sp. and *Geocharis antheroi* n. sp.) from the northern region of Portugal (Iberian Peninsula). This work provides diagnostic characters for these species and, in particular, for the structure of male genitalia. The affinities with other known species namely their putative closest relatives, as well as ecological and biogeographical comments are also included. A key for the identification of the males of the *Geocharis* species found north of the Tejo River in Portugal is also provided. New chorologist data on other endogean carabids from Portugal are also included.

**Key words:** Coleoptera, Carabidae, *Geocharis*, new species, North Portugal, Iberian Peninsula

### Resumo

Neste estudo são descritas duas novas espécies pertencentes ao género *Geocharis* Ehlers, 1883 (Carabidae: Trechinae, Anillini) da região norte de Portugal: *Geocharis barcorabelo* n. sp. and *Geocharis antheroi* n. sp. São dados os principais caracteres diagnosticantes nomeadamente os da genitália masculina. As afinidades com as espécies supostamente mais próximas são discutidas, assim como são feitas algumas considerações ecológicas e corológicas. É facultada uma chave dicotómica para os machos das espécies conhecidas a norte do rio Tejo em Portugal. São dados ainda novos dados sobre a distribuição de outras espécies de carabídeos endógeos de Portugal.

**Palavras chave:** Coleoptera, Carabidae, *Geocharis*, Novas espécies, Norte Portugal, Península Ibérica

### Introduction

The genus *Geocharis* Ehlers, 1883 belongs to the ground beetle subtribe Anillina. Representatives of this subtribe occur in many parts of the world, such as North and South America, Africa (especially Madagascar), Asia Minor, southern Asia, New Zealand and Mediterranean Europe (Sokolov *et al.* 2004). The genus *Geocharis* is very speciose, with 29 known species in the Iberian Peninsula and 5 in Morocco (Serrano 2003, Zaballos 2005, Serrano & Aguiar 2008) (Table 1). Moreover, 3 more species, all from Morocco, are considered *incertae sedis* (Zaballos 2005). Within this assemblage 18 species occur in Portugal (Table 1), 5 exclusively north of the Tejo River and 13 south of the same river (see Serrano & Aguiar 2004a, 2006, 2008).

All species of *Geocharis* are endogean, living in the soil and can be found frequently on the bottom surface of more or less deeply embedded stones. All species are eyeless (anophtalmous) and apterous. Many species seem very restricted in distribution (precinctive) (e.g., *G. portalegrensis* Serrano & Aguiar, *G. rodriguesi* Serrano & Aguiar), while others occur across large geographic areas (e.g., *G. femoralis* Coiffait, *G. coiffaiti* Serrano & Aguiar), thus reflecting local or regional patterns of endemism.

This work provides descriptions of two new species belonging to the genus *Geocharis* from Portugal. Since diagnostic external morphologic characters for females are very difficult to achieve for the majority of the *Geocharis* species, we provide a key for all known species found north of the Tejo River in Portugal but only for males.